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AUTHOR Karr, Chadwick; And Others
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ABSTRACT

This study compared the relative effectiveness of the Initial Teaching Alphabet (i. t. a.) program for teaching beginning reading with a matched program using traditional orthography (T. O.). Three waves of first grade students in ten predominately white elementary schools were randomly assigned to i. t. a. and T. O. classrooms. Summary evaluation carried out during the third grade on 861 students indicated no difference between i. t. a. and T. O. students in reading for comprehension, mathematics, or handwriting. The i. t. a. students, however, used more words and misspelled fewer words in their written compositions. The i. t. a. students also used more phrase modifiers, but overall did not use more different words. (Author)

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A Six-Year Experiment in the Use of the Initial Teaching Alphabet (i.t.a.) in the Teaching of Reading

Chadwick Kerr, Portland State University
George Ingebo, Portland Public Schools
Victor Doherty, Portland Public Schools
M. I. Charles E. Woodson, University of California, Berkeley

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Chadwick Karr, PhD

Department of Psychology
Portland State University
P.O. Box 751
Portland, OR 97207

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A. Objectives

The general objective of this research study was to compare the relative effectiveness of the Initial Teaching Alphabet (i.t.a.) for teaching beginning reading with a matched program using traditional orthography (T.O.). Specific objectives were to determine the effect of using i.t.a. on student proficiency in reading for comprehension, mathematics, spelling, writing compositions, and handwriting at the third grade level.

B. Theoretical Framework

The spelling of words in the English language is partially phonetic. In contrast, the i.t.a. program provides 44 unique letters and letter pairs, each of which has a single uniform pronunciation. The i.t.a. reading materials used in beginning reading instruction are printed in the i.t.a. alphabet. Because students do not have to learn exceptions to rules of pronunciation, it is hypothesized that beginning reading instruction will be more effective with a phonetic alphabet. Specific hypotheses related to the use of a phonetic alphabet in teaching beginning reading which were tested in this study were:

1. Students will learn to read more effectively as measured by their performance on tests of reading comprehension.

2. Students will perform better on math story problems.

3. Students will have no problems with spelling in making the transition from i.t.a. spelling to traditional spelling.

4. Students will learn to use more words and more difficult words in their written compositions.

5. Students will write compositions of higher semantic quality.

6. The quality of students' handwriting will be unaffected.

C. Methods and Techniques

1. One experimental (i.t.a.) and one control (T.O.) class were formed in each of ten predominately white elementary schools.

2. Both students and teachers were randomly assigned to either an i.t.a. or T.O. class.

3. Only schools with three sections per grade were selected in in order to provide an overflow group so that shifts to balance class loads could be made without shifting T.O. children into an i.t.a. class and vice-versa.

4. Schools in the experiment represented a normal distribution from high to low socio-economic status.

5. One entire set of ten i.t.a. and ten T.O. first grade classes field tested the i.t.a. and T.O. programs using essentially the same training, supervision, tests, materials, and methods that were to be used in the experiment itself. This took place in 1966-67.

6. The design called for three "waves" (1967-68, 1968-69, 1969-70) of first grade classes (ten i.t.a. and ten T.O.). The progress of these classes was evaluated through the third grade. The 30 i.t.a. classes constituted the i.t.a. or experimental group. The 30 T.O. classes constituted the T.O. or control group.

7. The first year treatment involved use of the basic approach developed by Dr. A. J. Mazurkiewicz, author of the Early to Read materials. The T.O. classes used regular Portland Public School reading program materials with supplementary reading materials being added to make the total program of materials equivalent to those used with the i.t.a. classes.

8. The second year treatment of the i.t.a. classes continued with Early to Read materials until transition to T.O. was accomplished, at which time students were placed in materials and instruction comparable to those for the T.O. classes. The T.O. classes in their second year continued in the regular Portland Public Schools reading program.

D. Data Source

1. Measurement was carried out as follows: Grade 2 - Form 12A, Cooperative Primary Reading Test; Grade 3 - McMenemy Primary Reading Test, and Portland Public Schools' Primary Mathematics Test. These third grade reading and mathematics tests were constructed in the Portland District using appropriate item analysis techniques and were standardized in the Portland District. Counts of misspelled words were made to evaluate third grade spelling. Also used in the third grade were the Zener-Bloser scale for evaluating third grade handwriting and the Portland District procedure for evaluating compositions.

2. The design for data analysis: Means of achievement tests for the i.t.a. group (N=437) and the T.O. group (N=424) were compared by means of multivariate analysis.

3. Spelling errors were recorded and analyzed according to types of errors anticipated as a result of an analysis of the i.t.a. alphabet. The number of errors of the types anticipated were compared between the i.t.a. and T.O. groups as were total errors. Total error differences were tested for significance by the chi square method.

4. All words used in composition were recorded and the frequency of use of each word was counted for the i.t.a. and T.O. groups, then listed alphabetically and in rank order for analysis.

5. Total words used and total numbers of different words used in composition were subjected to chi square tests to determine significance of differences between the i.t.a. and T.O. groups.

6. The compositions were evaluated for their semantic quality by counting the noun, phrase, and clause modifiers, and by counting the total number of words in a composition. The total count provided a measure of fluency. Chi square tests were used to determine the significance of differences between the i.t.a. and T.O. groups.

7. Samples of third grade handwriting were obtained from each student scheduled on four occasions. These were rated on a scale ranging from 0 to 7. The difference between the means for the i.t.a. and T.O. groups was subjected to a t test to determine the significance of the difference.

E. Results and Conclusions

1. Reading. The i.t.a. and T.O. programs were equally effective in teaching silent reading comprehension when performance was measured in the third grade. Differences in average reading performance among the ten schools were highly statistically significant and were related to socio-economic level of the neighborhoods served.

2. Mathematics. There was no statistically significant difference overall in mathematics performance between i.t.a. and T.O. groups when measured in the third grade.

3. Spelling. The i.t.a. students used statistically significantly more total words in writing third grade compositions, and misspelled fewer total words.

4. Compositions. The i.t.a. students used statistically significantly more phrase modifiers, but not more word or clause modifiers in writing third grade compositions. There was no statistically significant difference in the total number of different words used.

5. Handwriting. No statistically significant difference in quality of handwriting was found in the third grade between i.t.a. and T.O. students.

F. Educational and Scientific Importance of the Study

The results of this study provide evidence that reading for comprehension in the English language can be taught equally well with i.t.a. or T.O. materials, regardless of the economic level of children who are white. Evidence is also provided that the i.t.a. experience does not increase the basic vocabulary of these children as measured by compositions written in the third grade, but the experience does enhance their ability to spell correctly.